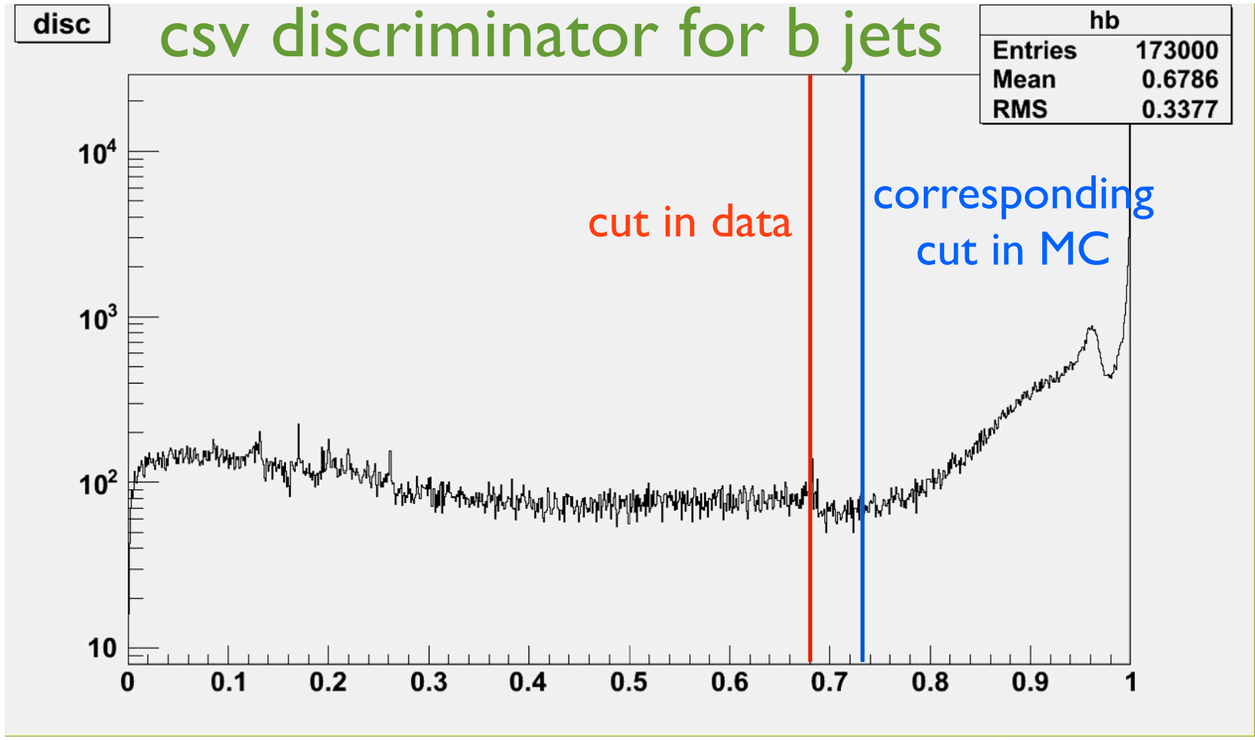
btag discriminator reshaping

Method

- Start with the CSV discriminator shape for jets of each type (shown on right for b)
- Use the histogram to find, for a given discriminator cut in data, the discriminator cut required to give the same efficiency in MC
  - this is the MC cut that multiplies the integral of the CSV distribution above the cut by the data/MC SF



$integral = i_{data}$

$integral = i_{data} * SF$

- Do this for the 3 different discriminator cuts with known SFs, i.e. the working points (T,M,L) with cuts of 0.898, 0.679, 0.244
- This gives the mapping between discriminator values in data and MC for 3 points => interpolate to give mapping for all values
- This procedure is done for each eta,p_T bin of the SF function

- And for each jet type (b, c, light), using the **algorithmic** flavour definition
- Result is a function that calculates value of the MC "reshaped" discriminator for each jet, given default discriminator, jet p_T, jet eta, and jet flavour.